

**MAYOR OF LONDON**

# **The Mayor of London's Plans for District Heating**

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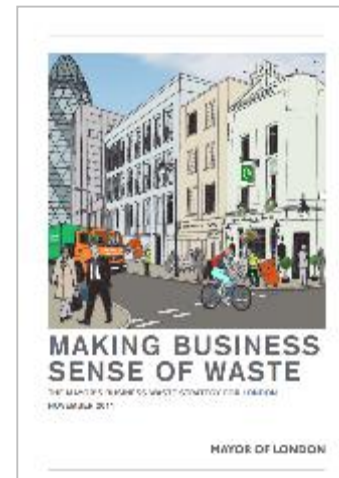
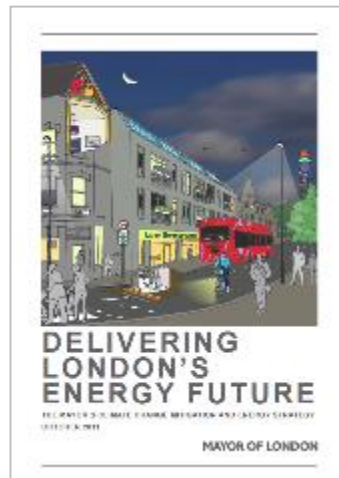
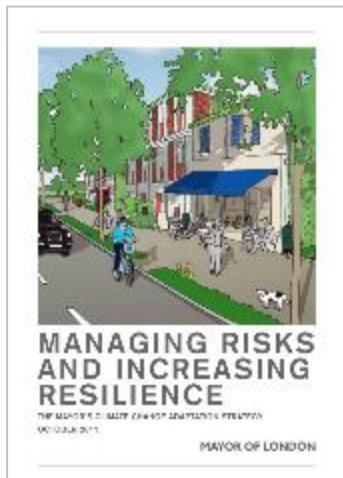
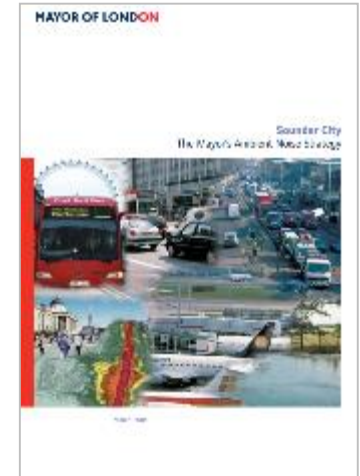
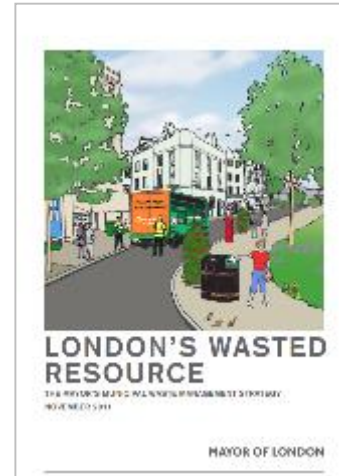
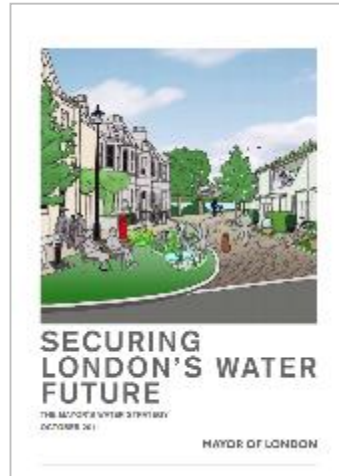
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## LONDON – THE GREENEST GLOBAL CITY





## PREVIOUS ENVIRONMENT STRATEGIES FOR LONDON



## WHAT'S NEW?

- London's first integrated environment strategy
- Ambition includes:
  - Zero carbon city
  - Zero waste city
  - World Health Organisation PM<sub>2.5</sub> targets for air quality
  - Increase green cover to 50%
  - Action plans for fuel poverty and solar
  - New funding to catalyse action
  - New businesses cases for energy efficiency and green infrastructure



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## LONDON WILL HAVE THE BEST AIR QUALITY OF ANY MAJOR WORLD CITY BY 2050

### Current emissions sources

#### NO<sub>x</sub>

Road Transport	51%
Non-road transport	11%
Built Environment	37%
Other	1%



#### PM<sub>10</sub>

Road Transport	50%
Non-road transport	3%
Built Environment & Industry	19%
Resuspension	23%
Other	4%



#### PM<sub>2.5</sub>

Road Transport	54%
Non-road transport	6%
Built Environment & Industry	30%
Resuspension	2%
Other	8%



### Zero emission London 2050

#### TRANSPORT

Strict new emission requirements across London (e.g. ULEZ, zero emission zone)



#### Mode shift to walking, cycling & public transport



#### All vehicles zero emission by 2050



#### Zero emission bus fleet by 2037 and all taxis zero emission by 2033



#### Reduce emissions from rail, river and aviation transport



#### NON-TRANSPORT

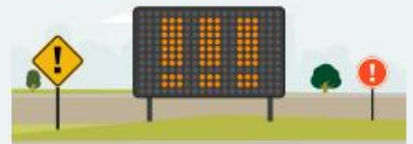
Prevent and reduce emissions from non-road mobile machinery



Reduce emissions from homes and workplaces, large scale generators, wood burning and biomass



Informing the public with alerts during high and very high pollution episodes



### London Environment Strategy Objectives

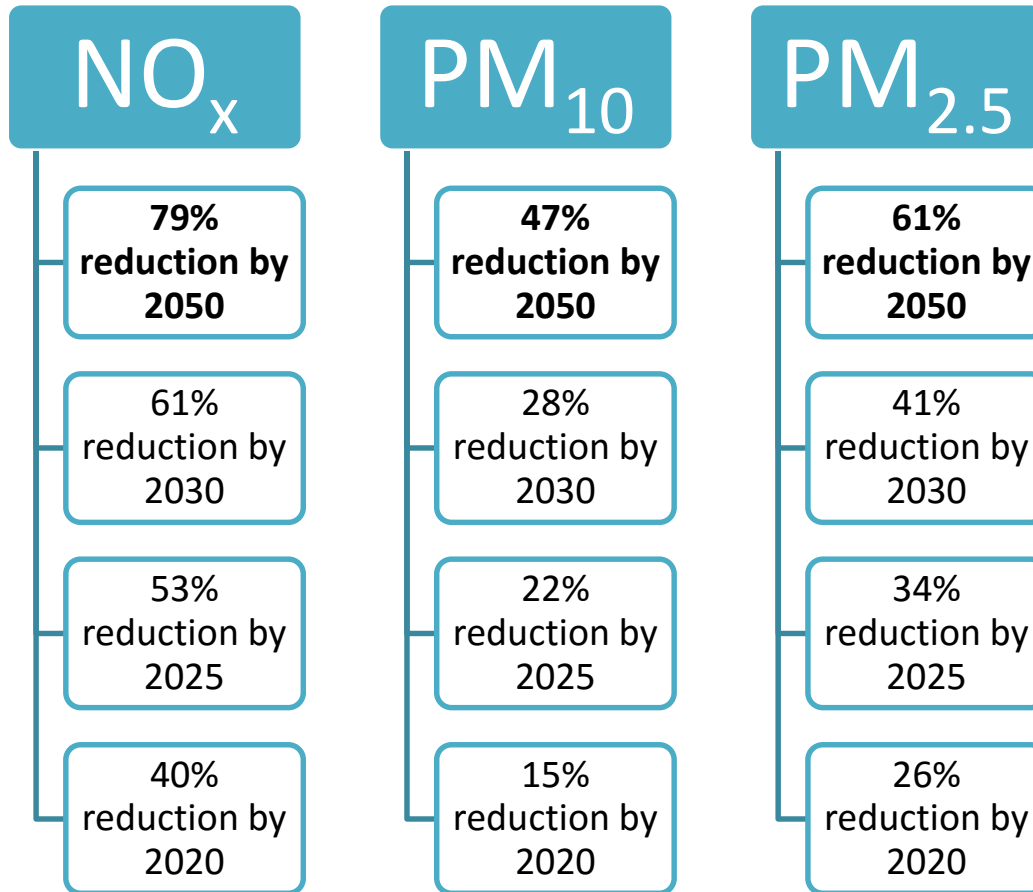
**EMPOWER PEOPLE TO REDUCE THEIR EXPOSURE TO POOR AIR QUALITY**

**MEET UK AND EU AIR QUALITY LIMITS AS SOON AS POSSIBLE**

**SET & ACHIEVE NEW, TIGHTER AIR QUALITY TARGETS FOR A CLEANER LONDON**

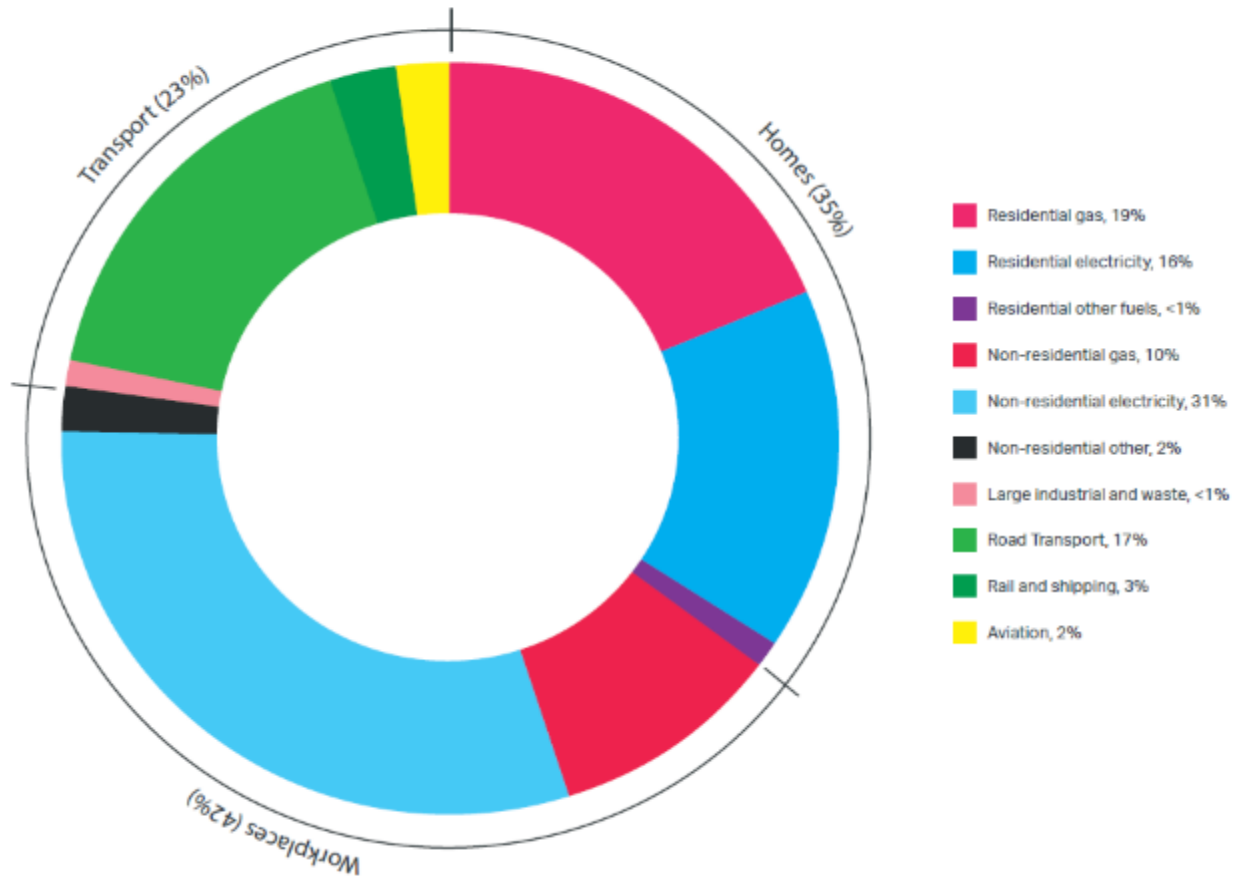
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## CLIMATE CHANGE MITIGATION AND ENERGY

Figure 29: 2014 emissions by sector (LEGGI)





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**2016**  
Zero carbon  
new homes



**2017** Central  
London transport  
emissions surcharge



**2018** Minimum energy efficiency  
performance standards for all rented  
properties

**2019** All new  
buildings zero  
carbon



**2019** Central  
London Ultra  
Low Emission  
Zone (ULEZ)

**2020**



**2020** Smart  
meter in every  
home

**2021** ULEZ expanded to inner  
London for light vehicles

**2022** 40%  
reduction in carbon  
emissions over 1990  
levels

**By 2030** UK  
Government  
decision on the  
long term role of  
natural gas

**2030**

**By 2030**  
15% of demand  
met by  
renewable and  
community  
energy



**2020s**  
Insulation of  
remaining lofts and  
cavity walls and  
replacement of  
remaining low  
efficiency gas boilers



**2026** Zero  
waste to landfill

**2025** GLA car  
fleet zero  
emission capable



**2025**  
Local zero  
emission  
zones

**From 2030**  
All GLA group  
heavy vehicles are  
fossil fuel-free



**2030s** City wide  
deployment of  
low carbon  
heating systems  
eg. heat pumps

**2037** All bus  
fleet zero  
emission



**2040**

**2040s** Gas and  
electricity networks  
reach zero carbon

**2050** 2 GW of solar  
PV installations

**2050** any remaining  
residual emissions  
offset

**2050** zero emissions  
from all transport and  
buildings

**2050**



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## ENERGY FOR LONDONERS

### Objective 1

Reduce emissions of London's homes and workplaces while protecting the most vulnerable by tackling fuel poverty

Fair tariffs

Energy efficiency

Fuel poverty support

### Objective 2

Develop clean and smart integrated energy systems utilising local and renewable energy resources

Decentralised energy

Solar generation and community energy

A smarter grid with demand side management

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- The Mayor is considering introducing a system of five-year carbon budgets to create an emissions pathway to 2050 that can be adapted as circumstances or technologies change.
- Develop clean and smart, integrated energy systems using local and renewable energy resources
- Natural gas will continue to play a valuable role both in the short and medium term for heating and for electricity generation
- A lack of clear government strategy on the future of gas has led to uncertainty on the wider approach to the long term decarbonisation of heat.
- For this reason, London must develop a flexible and more decentralised energy supply system. This is one that can adapt to future changes
- Over the next two decades, dependence on natural gas must be reduced by increasing the use of low carbon heating (harnessing energy from water, ground and air using heat pumps) as well as capturing more of the heat wasted from our buildings and infrastructure and using heat networks in the densest areas of the city
- The Zero Carbon Home - : Heating and cooling system Highly efficient low carbon energy supply through district heating or individual building heat pumps
- Energy hierarchy wording will be updated to:
  - be lean: use less energy and manage demand during construction and operation
  - be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly
  - be green: generate, store and use renewable energy onsite

## **OBJECTIVE 6.2 DEVELOP CLEAN AND SMART, INTEGRATED ENERGY SYSTEMS UTILISING LOCAL AND RENEWABLE ENERGY RESOURCES**

- District heating networks and renewable energy supply account for approximately half of London's decentralised energy systems, delivering the equivalent of two per cent of total demand. There is the opportunity to increase this type
- 15 per cent of London's energy demand to be supplied from local and renewable energy sources by 2030.
- There is potential for decentralised energy including large-scale solar PV installations and heat networks utilising technologies such as heat pumps in combination with secondary heat sources.
- To facilitate implementation the Mayor is providing support to boroughs and the private sector through the Decentralised Energy Enabling Project (DEEP)
- DEEP will provide technical, commercial, financial and other support services to assist public and private sectors to develop, procure and bring into operation these large scale projects.

## Consultation - how to submit your responses by 17 November 2017

- Stakeholders should respond via the online survey on: **[London.gov/environment-strategy](https://www.london.gov/environment-strategy)**
- You can complete the set consultation questions or upload your response as a letter
- Contact us, if you would like to attend more of our events on [EnvironmentComms@London.](mailto:EnvironmentComms@London.gov)
- [gov.uk](https://www.gov.uk)

